Review Paper on SignSense : An AI Framework for Sign Language Recognition

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Abstract*: In this project, we propose an ensemble learning-based system for Sign Language Recognition (SLR) integrated with an Explainable AI (XAI) component called SignExplainer. Our goal is to enhance transparency and trust in SLR systems by providing interpretable predictions. The ensemble learning architecture is designed to recognize sign gestures from images, and the SignExplainer module generates statistical values to evaluate prediction correctness. Performance evaluation on benchmark datasets like ASL and BSL demonstrates the effectiveness of our approach in interpreting predictions from various machine learning and deep learning models. Future work aims to extend this methodology to real-time applications and other Sign Languages, advancing accessibility and inclusivity for the hearing-impaired community*

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426